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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/779,421

Filing Date: February 13, 2004

Appellant(s): WOLLENBERG, ROBERT H.

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Michael E. Carmen  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5/12/2008 and 6/6/2008 appealing from the Office action mailed 7/31/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

Appellant has not argued the following double patenting rejections, thus are not subject to review.

Claims 1-3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 7,137,289 (referred to as '289) in view of Francisco et al (US Patent 5,308,522) and further view of Bailey et al (US Patent 3,108,397).

Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of copending Application No. 11/528747 in view of Bailey et al (US Patent 3,108,397).

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 11/699510 in view of Francisco et al (US Patent 5,308,522).

Claims 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of each of copending Application Nos. 11/605127, 10/699508, 10/699507, 10/779422 in view of Francisco et al (US Patent 5,308,522) and Guninther et al (US Patent Application 2004/0074452).

Furthermore, in an effort to clarify the record, please note the first double patenting rejection listed above is not provisional, despite what is stated on p 16 section E of the appeal brief entered 6/6/2008. Also, please note the latter rejections are provisional, despite what is stated on p 3-4 the appeal brief entered 5/12/2008.

#### **WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

Claims 1-3,5-9,21 are rejected under 35 U.S.C. 102(b) as being anticipated by **Francisco et al** (US Patent 5,308,522).

Claims 1,2,4-5,8,10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by **Migdal et al** (US Patent 5,062,980).

#### **(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,308,522	Francisco et al	5-1994
4,774,281	Chaffee et al	9-1988
US App'n 20040123650	Kolosoov et al	9-2002 (effective filing date)

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3,5-9,21 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Francisco et al** (US Patent 5,308,522) in view of **Chaffee et al** (US Patent 4,774,281).

**Francisco et al** teach throughout the document and especially example 3, stress activated activators (I and II) for lubricant compositions which are tested on an elastomer.

The testing of the stress activated activators per Francisco et al includes a base oil and a small amount of different oil additives and therein reads on claim 1 (a). The elastomer tested is taken as the elastomer of claim 1 (b). Data concerning the compatibility of the elastomer is "output" and presented as table 2 by Francisco et al thus reading on claim 1(d).

Also shown in table 2, Francisco et al teach the elastomer compatibility with the oil and additive mixture is discerned by measuring elastomer tensile strength, as compared the tensile strength prior to immersion in the oil mixture, therein reading on claim 1(c) as well as 8 and 9.

Francisco et al teach in column 2, synthetic oils per claim 2. Francisco et al teach detergents (elected species) in column 3, line 43 as set forth in claim 3. Francisco et al teach in column 6, line 39 the elastomer is a seal (elected species) as set forth in claims 4 and 5.

Francisco et al teach in column 6, line 59 the elastomer is immersed in the test solution for a predetermined time of 96 hours at and predetermined temperature of 121 degrees C, reading on claim 6 and in the range of claim 7.

Francisco et al teach in column 6, line 61, the oil mixture is diluted with another oil, reading on claim 21.

Since a library can have as few as two members, the composition of two different additives (I and II) per Francisco et al read on claim 33. The aforementioned data table of Francisco et al is taken as meeting the limitations set forth in claim 34.

Francisco et al do not teach thermal conditioning of the elastomer at a temperature at about 100-200 degrees C for about 20 hours to about 60 hours, prior to immersing the elastomer in the oil/additive sample, such as set forth in claims 15 and 16.

**Chaffee et al** teach, throughout the document and especially in column 2, line 47 thermal conditioning of a rubber stock at 177 degrees C for 22 hours.

It would have been *prima facie* obvious for one of ordinary skill in the art, at the time the claimed invention was made to apply the thermal conditioning of Chaffee et al. toward the elastomer testing protocol of Francisco et al.

One of ordinary skill in the art would have been motivated to use the thermal conditioning of Chaffee et al in the elastomer testing protocol of Francisco et al because it would have provided an improved compression set, as noted by Chaffee et al in column 1, line 44.

One of ordinary skill in the art would have had a reasonable expectation of success in combining the thermal conditioning of Chaffee et al with the elastomer testing protocol of Francisco et al because Chaffee et al had applied thermal conditioning to silicone rubber. Therefore it would not have been unreasonable to apply thermal conditioning to the method of Francisco et al because silicone rubber is well within the scope of synthetic rubber (elastomer seals).

Claims 1-3,5-9,21 and 11-14,17-20 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Francisco et al** (US Patent 5,308,522) in view of **Koloso** **et al** (US Patent Application 2004/0123650 – IDS entry 2/16/2006)

**Francisco et al** is relied on as above.

Francisco et al do not teach sample sizes no more than 10 ml (claim 14), the use of a robotic assembly (claim 17), control by a computer (claim 18), storing data (claims 19,33,35) or using the data of claim 1(c) for further calculations (claim 20).

**Koloso** **et al** teach, throughout the document and especially figure 1 and paragraph 0068 the use of a robot which is controlled by a computer to screen and analyze a library of material samples.

Koloso

et al teach in and paragraph 0021 sample sizes as small as 1 ml, which is in the range of claims 11-14.

It would have been *prima facie* obvious for one of ordinary skill in the art, at the time the claimed invention was made to use the computer controlled robot of Koloso

et al with the elastomer testing protocol of Francisco et al.

One of ordinary skill in the art would have been motivated to use the computer controlled robot of Koloso

et al with the elastomer testing protocol of Francisco et al because of the need to reduce time in analyzing samples and it would be especially attractive to rapidly test a plurality of samples on a common substrate, as noted by Koloso

et al in paragraph 0005.

One of ordinary skill in the art would have had a reasonable expectation of success in combining the computer controlled robot of Koloso

et al with the elastomer testing protocol of Francisco et al because Koloso

et al has applied the computer controlled robot toward rheological studies (e.g. viscosity or elasticity). Therefore it would not have been unreasonable to apply the computer controlled robot as part of the method of Francisco et al because tensile strength is directly related to elasticity.

#### **(10) Response to Argument**

As set forth in claim 1, the present claimed invention is drawn to a method of testing the compatibility of elastomers with various motor oil compositions. Appellant

argues, see the paragraph bridging pp 8-9 through p 9 of the Appeal Brief entered 6/6/2008, the recitation of "high throughput" and under "program control," set forth in the preamble breath life, meaning and vitality to the claim.

Upon further consideration, with regard to anticipation, the examiner acknowledges this may be true, and has withdrawn the above rejections under 35 USC 102 accordingly. On the other hand, with regard to obviousness under 35 USC 103, the examiner respectfully disagrees for the following reasons.

*Francisco et al in view of Chaffee et al*

High Throughput

As recited in paragraph 0022 of present published application and quoted in the appeal brief p 6 filed 6/6/2008, high throughput is defined as:

The expression "high throughput" as used herein shall be understood to mean that a relatively **large number of different lubricating oil compositions can be rapidly prepared** and analyzed.

Emphasis Added.

On p 9 first full paragraph of the appeal brief entered 6/6/2008, appellant asserts Francisco et al teaches only a few lubricating oil samples containing amine phosphates I and II (benzotriazoles) as additives in examples 2 and 3. The Board's attention is respectfully invited to the claims, however where Francisco et al teach quite a few more benzotriazoles are presented than appellant asserts. The Markush group in claim 1, for instance, contains *at least 900 (30x30)* different compounds: R1 and R are each independently hydrocarbyl groups having from 1 to 30 carbon atoms. Furthermore, the



examiner submits that further modified R groups containing various rings and/or heteroatom substitutions are *not excluded* by Francisco et al, thus Francisco et al teach a greater number benzotriazoles additives than even 900.

On p 12 of the appeal brief entered 6/6/2008, appellant dismisses Chaffee et al as no more a relevant reference than Francisco et al. The examiner respectfully disagrees. As reflected in the abstract, Chaffee et al concerns a silicone rubber stock applied toward preparing elastomers, which the examiner submits is very relevant to the claimed subject matter. In examples 1-5, Chaffee teach at least 5 different silicone rubber elastomer compositions.

Taken together, Francisco et al in view of Chaffee et al teach at least 4500 (5x900) different combinations of elastomer and motor oil plus benzotriazole additive compositions, thus the examiner most respectfully submits Francisco et al and Chaffee et al certainly provide a large number of different lubricating oil compositions that can be rapidly prepared, which is consistent with the definition of high throughput defined in the present specification, quoted above.

In regard to high throughput providing rapid *analysis*, the examiner acknowledges that this is afforded, for example, by the computer controller element 230 (i.e. program control) shown in figure 2 of the present specification and is discussed next.

#### Program Control

As recited in paragraph 0023 of present published application and quoted in the appeal brief p 7 filed 6/6/2008, program control is defined:

The expression "program control" as used herein shall be understood to mean **the equipment used herein** in providing the plurality of lubricating oil compositions is **automated** and controlled by a microprocessor or other computer control device.

Emphasis added.

In this vein, the examiner submits automation of a manual activity is not patentable in accordance with MPEP 2144.04 III and *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined "old permanent- mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed." The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.).

Here, in so far as "program control" set forth in claim 1 provides a plurality of lubricating oil compositions by *automating* the mechanical equipment, such as discussed in the quotation from the present specification concerning figure 2 on pp 7-8 of the appeal brief entered 6/6/2008, the examiner respectfully submits that an automatic means to replace a manual activity, which accomplished the same result (i.e. the elastomer testing protocol according to Francisco et al) is not sufficient to distinguish the presently claimed subject matter over the prior art.

In conclusion, the examiner most respectfully submits, while "high throughput" and "program control" breath life, meaning and vitality to claim 1, said limitation does not serve to adequately differentiate the present invention from the prior art according to Francisco et al and Chaffee et al.

*Francisco et al in view of Kolosov et al*

#### Flowable Samples

Appellant asserts, see pp 14-15 of the appeal brief entered 6/6/2008, nothing in Kolosov et al would lead one skilled in the art to screen elastomers which are susceptible to serious deterioration from **lubricating oil** compositions because (i) "the **primary goal** of Kolosov et al is to screen or test most any *flowable* material that may be a commercial product itself or may be an ingredient or **portion within a commercial product** for rheological properties." (ii) "the polymer [e.g. rheological samples according to Kolosov et al] **may** need to be dissolved, dispersed or emulsified to form a liquid sample." Bold emphasis added. Italics in the original.

In this vein, the examiner submits that flowable samples merely represent a preferred embodiment for Kolosov, as mentioned on p 4 of the Advisory Action mailed 3/10/2008 , quoted at the bottom of p 13 of the appeal brief entered 6/6/2008 and duplicated below as a convenience to the reader.

...Kolosov et al state in paragraph 0043, "**In one particular embodiment**, the present invention is employed for screening flowable materials" Emphasis added. In this regard, according to MPEP 2124, disclosed examples and preferred embodiments do not constitute a teaching away

from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." In re Gurley, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994). In paragraph 0044, Kolosov et al state further, "a polymer sample may be **heterogeneous**, and even further in paragraph 0048, that the polymer sample can, regardless of its particular form have various attributes including variations with respect to polarity, **solubility** and/or **miscibility**." Emphasis added. The examiner submits flowable materials represent a preferred embodiment for Kolosov et al. The examiner further submits elastomer samples are heterogen[e]ous with variations with respect to solubility and miscibility, and thus compatible with the robot of Kolosov et al.

In fact, as mentioned above, appellant admits flowable samples as merely preferred by Kolosov et al in calling rheological analysis flowable samples as the *primary* (i.e. not only) goal of Kolosov et al. Similarly, appellant admits that the polymer *may* (i.e. but not necessarily) need to be dissolved, dispersed or emulsified to form a liquid sample. Accordingly, the examiner respectfully submits *non*-flowable materials represent an secondary (alternative) embodiment for Kolosov et al. The Board's attention is respectfully invited to note nowhere does Kolosov et al state that the system is only limited to flowable samples. The Board's attention is especially invited to the

claims, which may be construed the most preferred embodiment of Kolosov et al, which do not recite any limitations regarding flowable samples.

Regardless, assuming *arguendo* that the system presented by Kolosov et al, for whatever reason, is only applicable toward flowable samples, the examiner nevertheless submits that the claimed invention remains obvious over Francisco et al and Kolosov et al in view of MPEP 2143 and the recent supreme court ruling *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1385 at 1396 (2007) which set forth various rationales including the use of known technique to improve similar devices (methods, or products) in the same way as being obvious. Here, the similar technique of Francisco et al directed to testing elastomers in various motor oil compositions may be improved by a similar device comprising a robot controlled by a computer to screen and analyze samples such as afforded by Kolosov et al.

In conclusion the examiner most respectfully submits, non-flowable samples, such as presented by Francisco represent a viable sample for the sample analysis robot under computer control according to Kolosov et al. This notwithstanding, the use of known technique to improve similar devices methods in the same way as being obvious under *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1385 (2007).

#### Kolosov et al Teach Toward the Claimed Subject Matter

Appellant asserts, see p 14 first full paragraph of the appeal brief entered, 6/6/2008 Kolosov et al is interested in properties such as density, melt index, thermal degradation, aging characteristics, weight-average molecular weight, number-average

molecular weight, viscosity-average molecular weight, peak molecular weight, approximate molecular weight, polydispersity index, molecular-weight- distribution shape, relative or absolute component concentration, chemical composition, conversion, concentration, mass, hydrodynamic radius, radius of gyration, chemical composition, amounts of residual monomer, presence and amounts of other low-molecular weight impurities in samples, particle or molecular size, intrinsic viscosity, molecular shape, molecular conformation, and/or agglomeration or assemblage of molecules.

While appellant does not attribute the above list of properties to Kolosov et al, it appears to come from paragraph 0065. In this vein, the examiner notes said list is taken out of context: In the same passage, Kolosov et al consider *rheological* properties including **without limitation**, viscosity, **viscoelasticity** (e.g., shear dependent viscoelasticity), **shear thinning**, shear thickening, yield, **stress and the like**.

While the examiner agrees the former list of material proprieties presented by appellant appears to have little to do with the present claimed subject matter , the examiner submits that viscoelasticity shear thinning and stress are each are related to elastomer tensile strength or elongation measurements, such as set forth in claim 8 of the present application. The examiner submits, for instance, elastomers are elastic and whereupon loss of elasticity by shear thinning or stress the elastomer will lose tensile strength and/or become elongated.

Additionally, regarding Kolosov et al not representing a pertinent reference, despite appellant's vigorous arguments to the contrary, the Board's attention is respectfully invited to paragraphs 0042-0043 of Kolosov et al which states:

The present invention may be used to screen or test most any flowable material that may be a commercial product itself or may be an ingredient or portion within a commercial product. Exemplary commercial products, which may be tested or may include ingredients that may be tested according to the present invention include pharmaceuticals, coatings, cosmetics, adhesives, inks, foods, crop agents, **detergents**, protective agents, **lubricants** and the like. Polyelectrolytes or polyampholytes may also be screened.

In a one particular embodiment, the present invention is employed for screening flowable samples. The invention thus has particular utility in connection with the screening of a number of different material forms including, for example, gels, **oils**, solvents, greases, creams, foams and other whipped materials, ointments, pastes, powders, films, particles, bulk materials, dispersions, suspensions, emulsions or the like...

Emphasis added.

In this regard, the examiner most respectfully submits the oil, lubricants and detergents (e.g. see present claim 3) and rheological properties of Kolosov et al teach *toward* the claimed subject matter.

Claim 33

Appellant argues, see p 13 first full paragraph last sentence of the appeal brief entered 6/6/2008, Kolosov et al do not provide any teaching, motivation or suggestion of a combinatorial library for storing lubricating oil composition elastomer compatibility data on a programmed controller for a plurality of different lubricating oil compositions, as recited in present appealed Claim 33.

In response to appellants arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Here, elastomer compatibility data is provided by Francisco et al in table 2. Storage on a computer controller is provided by Kolosov et al in paragraph 0093, which states "For storage and/or manipulation of data such as the responses of samples, the material properties of samples, combinations thereof or the like, it may be desirable for the data to be received within one of the computer sub-systems."

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.



Art Unit: 1639

Respectfully submitted,

/Christopher M Gross/

Examiner, Art Unit 1639

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